# *Subjective knowledge*[1]

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It is obvious that a man who can see knows things which a blind man cannot know; but a blind man can know the whole of physics. Thus the knowledge which other men have and he has not is not a part of physics.

Bertrand Russell[2]

## 1. Introduction

Our knowledge depends on context in various ways. Some contextualists about knowledge, for example, believe that knowledge claims should be assessed relative to certain kinds of dialectical contexts.[3] Here I am concerned with another kind of contextual dependence: the way in which the knowledge we have is only *accessible* or *available* from within certain contexts. These contexts are the contexts of a subject's own experience and position in the world; for this reason, I call the kind of knowledge which is dependent on context in this way, *subjective knowledge*. I shall argue here that part of the abiding interest of Frank Jackson's famous 'knowledge argument' lies in its defence of the idea that there is such knowledge.[4] Much has been written about Jackson's argument; my hesitation in adding another discussion to the pile has been overcome by my sense that this proper lesson of the argument has yet to be grasped.

The knowledge argument is officially designed to show, from apparently uncontroversial premises and simple reasoning, that the physicalist conception of the world is false. D.H. Mellor rightly points out that if sound, the argument would show more than that: it would show that some *facts* are *subjective*, and thus that a view

[1] An earlier version of this paper was presented at the Philosophy of Science seminar at the Eötvös Lórand University, Budapest, at the Universities of Birmingham, Kent, Oslo and Wales (Swansea), and at the conference *Mind and Action III* at the Institute for Philosophy of Language, Lisbon. Many thanks to Brian McLaughlin, my commentator at the Lisbon conference, for his comments there (and for the Russell quote); to Hallvard Lillehammer for his excellent editorial advice; and to Katalin Farkas, Carsten Hansen, Penelope Mackie, Greg McCulloch, Harold Noonan, Alex Oliver and James Tartaglia for discussion and criticism.
[2] *The Analysis of Matter* (London: George Allen and Unwin 1927) p.389
[3] See, for example, David Lewis, 'Elusive knowledge' in his *Papers in Metaphysics and Epistemology* (Cambridge: Cambridge University Press 1999).
[4] Frank Jackson, 'Epiphenomenal Qualia' *Philosophical Quarterly* 32 (1982) 127-36.

which says that all facts are *objective* would be false.[5] Therefore, the view that objective science can state all the facts is false too, if the knowledge argument succeeds. Mellor, along with many others, thinks he has to show that the knowledge argument is unsound, since he thinks he can't accept its conclusion. He therefore adopts the ability hypothesis of Lewis and Nemirow, which is intended to show that the knowledge argument is fallacious, resting on an equivocation on 'knowledge'.[6]

I shall argue here, against Lewis, Nemirow and Mellor, that the ability hypothesis is mistaken, and that all the other physicalist attempts to reject the argument (either as invalid or as unsound) are equally mistaken. The knowledge argument is a sound argument for the conclusion that there are subjective facts: facts about the subjective character of experience. However, unlike some defenders of the argument,[7] I do not think that this conclusion threatens any plausible version of physicalism. Physicalists should accept that there are subjective facts, and they should deny, therefore, that all facts are objective, in the sense I shall explain. Neither physical science, nor any other objective science, can state all the facts; but this should not be the basis for a critique of physicalism.

## 2. The knowledge argument

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[5] 'Nothing like experience' *Proceedings of the Aristotelian Society* 93 (1992-3) 1-16. Since a lot of what follows depends on what 'objective ' and 'subjective' mean, the reader will have to wait for a more precise statement than I have given here. I am indebted to Mellor for first alerting me to the generality of the knowledge argument's conclusion; I discuss his own views in more detail in 'Subjective facts' in H. Lillehammer and G. Rodriguez-Pereyra (eds.) *Real Metaphysics* (London: Routledge forthcoming).

[6] See David Lewis, 'What experience teaches', who acknowledges a debt to Lawrence Nemirow, 'Physicalism and the subjective quality of experience'. Both papers are reprinted in W.G. Lycan (ed.) *Mind and Cognition* (Oxford: Blackwell 1990).

[7] See Howard Robinson, *Matter and Sense* (Cambridge: Cambridge University Press 1982) and Jackson's original paper, 'Epiphenomenal Qualia'. It should be noted that Jackson has changed his mind about what the knowledge argument shows. See his 'Postscript' to 'What Mary did not know' in Paul Moser and J.D. Trout (eds.) *Contemporary Materialism* (London: Routledge 1995); for Jackson's physicalism, see *From Metaphysics to Ethics* (Oxford: Oxford University Press 1998) chapters 1 and 2. If I am right in what I say here, he did not need to change his mind about the soundness of the argument, even after his conversion to physicalism; he just needed to re-describe the conclusion. Of the many discussions of Jackson to which I am indebted, I must single out Terence Horgan, 'Jackson on physical information and qualia' *Philosophical Quarterly* 34 (1984) 147-152.

Jackson's famous argument does not move from a claim about the existence of experience to the denial of physicalism; it moves from a claim about how we *know* about experience to the denial of physicalism; hence its name.[8] The argument starts with a thought-experiment about Mary, who has spent all her life in a black-and-white room, has never seen any colours other than black and white. Now imagine that Mary has made an intensive study of the science of colour in all its aspects—physics, physiology, psychology and so on. In fact, let's suppose that she knows all the physical facts about colour. Now suppose that one day Mary leaves her black-and-white room, and the first thing she sees is a red tomato. It is natural to say that she now knows something which she did not know in the black-and-white room: what it is like to see red. Yet this thing she now knows is not a physical fact, since by hypothesis she knew all the physical facts in the black-and-white room. So if a new piece of knowledge is a new fact, then Mary learns a new fact when she leaves the black-and-white room. If physicalism is (as seems plausible enough) the view that *all facts are physical facts*, then it appears that physicalism is false.

The knowledge argument does not beg the question against physicalism. This is clear if we represent its premises and conclusions as follows:

(1) In the room, Mary knows all the physical facts about colour.

(2) Having left the room, Mary learns something new about colour.

(3) Therefore: not all facts are physical facts.

That, in essence, is the argument—though some extra assumptions are needed to demonstrate its validity properly. But it is clear that neither premise (1) nor premise (2) obviously beg any questions against physicalism. A physicalist could hardly object that the idea of someone learning all the physical facts begs the question against physicalism. And (2) seems an irresistible and simple thing to say about the story as described above. Maybe, when these premises are scrutinised, they will come to show

[8]See the references to the statements of the argument by Jackson and Robinson in footnote 6. In its essence, the argument has a longer history than this, of course. Earlier 20th century sources are Herbert Feigl's *The 'Mental' and the 'Physical'* (Minneapolis: University of Minnesota Press 1958) p.68; and in Broad's *The Mind and its Place in Nature* (London: Routledge and Kegan Paul 1926) p.71.

some deep incoherence – but the argument as stated does not obviously beg the question.

Physicalists have tried to resist the conclusion by impugning either the validity of the argument, or the truth of the premises. I think they are wrong. I think that the argument is valid, and that physicalists should accept its premises. So they should accept its conclusion. Yet I shall argue too that they should not worry about this conclusion; so this conclusion cannot be that physicalism, properly understood, is false.

In §3, I will put to one side the idea that the knowledge argument either depends on, or entails the existence of, *qualia*—in the sense in which the existence of qualia is a matter of dispute. In §4, I will assess the objection that the argument is invalid, and in §5, I will assess the objections to the premises. In §6 I will bring out what I think the argument really shows: that there are subjective facts. In §7 I shall examine the consequences of this conclusion for physicalism.

**3. The knowledge argument and qualia**

It is sometimes said that (a) the knowledge argument assumes the existence of qualia, considered as 'intrinsic, non-representational, introspectible' qualities of experiences (mental states or events); or that (b) the knowledge argument establishes that there are such qualia. Neither of these claims seems to me correct. In fact, it seems to me that the question of qualia is *irrelevant* to the knowledge argument, in the sense that to accept the accept the argument, one need neither assume the existence of qualia nor need one accept that the argument shows there are qualia – even if the argument is wholly successful. Assumptions (a) and (b) are false. (Of course, sometimes 'qualia' is taken simply as a term for conscious mental state; in this sense, the argument does assume qualia. But this is not the sense of 'qualia' in which there is a debate over the existence of qualia.[9])

The simplest way to see that (a) is false is to observe that if one were an intentionalist about phenomenal consciousness, and therefore one were to deny qualia,

[9] See my paper, 'The origins of qualia' in T. Crane and Sarah Patterson (eds.) *History of the Mind-Body Problem* (London: Routledge 2000) for a discussion of the senses of 'qualia'.

one would not have any easy route out of the knowledge argument.[10] Intentionalists about phenomenal consciousness do not think that their intentionalism as such provides them with a solution to the knowledge argument; they still think they need to refute the argument (if they want to defend physicalism, as understood by the argument).

But nor should we accept (b): that the knowledge argument *establishes* that there are qualia in the above sense. It would only establish that there are qualia if (i) the only way to interpret the new knowledge Mary has is knowledge about experiences, and (ii) the only way to interpret this knowledge about experience is in terms of knowledge of qualia. But neither of these moves are obligatory. Taking them in reverse order: (ii) an intentionalist can say that the knowledge Mary gains is knowledge about the nature of some of her intentional states. Having seen red for the first time, Mary now knows what it is like to be in an intentional state of a certain special kind (seeing red). On intentionalist views, this state does not involve qualia, and nothing in the story so described requires one to say that it does. (i) A more unusual, but still coherent, response is that Mary learns something about the world when she sees red for the first time. She learns about some properties of red things, namely, those properties which can only be known by *looking* at red things. One apparently coherent response to the knowledge argument, then, is to say that Mary learns something about colours, about physical properties in the world. I am not trying to argue that one or other of these views is correct; I just want to point out that one could accept the conclusion of the knowledge argument without accepting that there are qualia.

What is true is that if one had some independent reason for believing in qualia – say, for example, one were persuaded by Ned Block's 'inverted earth' argument – then one might wish to use an appeal to qualia in trying to understand what the lesson of the knowledge argument is: Mary learns facts about qualia (what it is like to have experiences involving them). Now I don't think this is the right thing to say, but all I

[10] For intentionalism about consciousness, see Michael Tye, *Ten Problems of Consciousness* (Cambridge mass.: MIT Press 1995).

need to emphasise at the moment is that *whether or not it is true,* this view does not follow from the argument as I present it.

I conclude that the knowledge argument is independent of the question of qualia.

**4. Challenging the argument's validity: the 'ability hypothesis'**

Those who challenge the argument's validity normally claim that it involves an equivocation on 'know'.[11] In the first premise, 'know' is used to express propositional knowledge, but (they say) in the second premise it is used to express knowledge-how or ability knowledge. We should agree that Mary learns something new, but what she learns when she first sees red is how to recognise red, to imagine red and remember experiences of red things.[12] Having seen something red, she can now recognise the colour of fire engines, she can consider whether she wants to paint her bedroom red, and she can remember this decisive encounter with a tomato. These are cognitive abilities, not pieces of propositional knowledge, and it is a widely-held view that there is no reduction of ability knowledge to propositional knowledge. So Mary can learn something new—in the sense of gaining an ability—but it is not a new piece of propositional knowledge. Knowing what it is like to see red is know-how. So the knowledge argument is invalid because it involves a fallacy of equivocation: 'know' means something different in the two premises. Since it is only in the case of propositional knowledge that the objects of knowledge are facts—if I know how to ride a bicycle, *how to ride a bicycle* is not a fact—it is concluded that Mary does not come to know any new facts and physicalism is saved.

This response, known as 'the ability hypothesis', presupposes two things: (i) that knowledge-how is ability knowledge, and it is completely different from, and irreducible to, propositional knowledge; and (ii) that regardless of the abilities she acquires, Mary does not come to know any new propositions whatsoever. The first

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[11]For a useful catalogue of responses to the knowledge argument, see Robert Van Gulick, 'Understanding the phenomenal mind', in Ned Block, Owen Flanagan and Güven Güzeldere (eds.) *The Nature of Consciousness* (Cambridge, Mass.: MIT Press 1997) pp.559-563.

[12]See David Lewis, 'What experience teaches', Lawrence Nemirow, 'Physicalism and the cognitive role of acquaintance', D.H. Mellor, 'Nothing like experience'.

claim (i) is a general theoretical claim about the relation between know-how, abilities and propositional knowledge. This claim is actually more dubious than is normally assumed; but space does not permit me to examine it here.[13] I shall concentrate rather on the second claim, (ii).

The defenders of the ability hypothesis say that Mary learns no new propositional knowledge at all. But this claim is really very implausible. For there is a very natural way for Mary to express her knowledge of what it is like to see red: 'Aha! Red looks like this!'. (Let's suppose, for simplicity, that Mary knows that tomatoes are red, and she knows that she is seeing a tomato; these are innocuous assumptions.) Now 'Red looks like this' is an indicative sentence; in a given context, it surely expresses a proposition; and in the context described, the proposition is true. (It could have been false. Suppose Mary were shown a joke tomato, painted blue; the proposition expressed by 'Red looks like this' would be false; red doesn't look like that.) And it is a proposition that Mary did not know before. This all assumes that a sentence containing a demonstrative can be used to express a proposition; but this assumption is innocuous and should be accepted by all participants in the debate (we shall see its full relevance later). So *even if* Mary did acquire lots of know-how, and *even if* know-how is essentially different from propositional knowledge, then there is still something that she learns which she couldn't have known before. And that is enough for the argument to succeed.

Further support for the view that there is a proposition which is learned is provided by Brian Loar's observation that someone can reason using the sentence 'Red looks like this': they could embed it in a conditional, for example, 'If red looks like this, then either it looks like this to dogs or it doesn't'. On the face of it, this is a conditional of the form 'If P then Q'; the substituends for P and Q are bearers of truth-values and therefore possible objects of propositional knowledge.[14] The ability

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[13]For excellent discussion of this, see A.W. Moore, *Points of View* (Oxford: Oxford University Press 1997) chapter 8 (esp. p. 171) and Paul Snowdon, 'Knowing how and knowing that: a distinction and its uses reconsidered' (forthcoming).

[14]Brian Loar, 'Phenomenal states' in Block *et al* (eds.) *The Nature of Consciousness*, p.607. I must ignore here the bearing this point has on the famous 'Frege-Geach' problem.

hypothesis has to explain this away if it is to support its conclusion that nothing propositional is learned. I doubt whether this can be done. For all these reasons, I reject the ability hypothesis.

An alternative way to question the validity of the argument is to say that the knowledge gained is knowledge by acquaintance.[15] Mary is acquainted with some feature of redness (what it looks like) or with some feature of her experience (qualia, as it may be). Acquaintance knowledge is not reducible to propositional knowledge; but these features (of redness, or of experiences) may nonetheless be physical. To this objection, my response is essentially the same as my response to the ability hypothesis: unless the objector can show that Mary does *not* learn any propositional knowledge too, then the fact that she does gain acquaintance knowledge is irrelevant to the argument's conclusion. And we have a perfectly clear example of the kind of proposition Mary learns: the proposition expressed by the sentence 'red looks like this'.

Mellor thinks that the Ability Hypothesis refutes the knowledge argument; he also says it explains why Nagel is wrong about the limits of objective knowledge:

> These are not the only otherwise mysterious facts which the know-how theory explains. It also explains science's mysterious inability, which so impresses Nagel, to tell us what a bat's sonar experiences are like. But on the know-how theory this is no mystery, nor a limitation on the factual scope of objective science. For the only knowledge any science ever gives us is knowledge of facts. And even if many abilities depend on knowing facts, there is always more to having those abilities than knowing those facts.[16]

But if the ability hypothesis is false, then it cannot explain why Nagel is wrong about the 'factual scope of objective science'. Indeed, it seems rather that there are facts about the bat's experience (assuming it has experiences) which are beyond the scope of objective science: the facts which would be truly expressed (*per impossibile*) by saying 'Experiencing the world from a sonar point of view is like *this'*. Or to take a more everyday example, the fact that I can express when I say 'red looks like this' is a fact that a blind person cannot know. Yet, as Russell points out, a blind person can

[15] This is the line taken by Paul Churchland in 'Reduction, qualia and the direct introspection of brain states' *Journal of Philosophy* 82 (1985) 8-28.
[16] Mellor, 'Nothing like experience' p.7.

know the whole of physics. And there is nothing relevant to this debate which stops the blind person learning the whole of objective science. True enough, the sighted person has abilities which the blind has not, and Mellor is right that no amount of science can give you these abilities. But this is irrelevant. The important point is not that there are these abilities which someone who knows what it is like has; the important point is that someone who knows what it is like knows *that certain things are the case*. This is the propositional knowledge which the sighted have and the blind lack, in addition to whatever abilities they may also have.

**5. Challenging the premises**

I therefore reject these attempts to dispute the validity of the argument; the argument is valid. But what about the premises? Few physicalists wish to challenge the first premise, that in the story as told, Mary knows all the physical facts about colour vision.[17] For suppose a physicalist did deny this. Then they would have to accept that there are some *physical facts* which in principle cannot be known without having certain experiences. Physics, the science which states the *physical facts*, is in principle *incompletable* until certain very specific experiences are had. Now it may be true that having knowledge in general requires having experiences of some kind. Yet how can physicalism, which bases its epistemological outlook on physical science, require that science demands us to have certain *specific* experiences? The suggestion has little plausibility.

So most responses to the argument have challenged the second premise instead, and claimed that Mary does not learn any new fact. In a recent survey, Güven Güzeldere describes this character of this dominant response as follows:

> The pivotal issue here is whether the having of an experience constitutes a special class of irreducible 'first-person facts' or whether what is lacking in

[17]But see Churchland, 'Reduction, qualia and the direct introspection of brain states'. In *Consciousness Explained* (London: Allen Lane 1991), Dennett launches a general attack on the methodology of thought-experiments as a way of learning about consciousness.

> Mary has to do with her experiential 'mode of access' to facts that she is already acquainted with.[18]

The idea seems to be that Mary already knows all the facts in question, she simply gains a new 'mode of access' (whatever that is) to a fact she already knew. If this response were right, then certainly the argument would be undermined. But it seems to me that, despite its popularity, the response cannot be correct.

The central idea is that Mary apprehends or encounters in a new way something she already knew. The phrase 'mode of access' is often used to describe what this encountering in a new way is. But what are 'modes of access'? One way to understand them is in terms of new *Fregean mode of presentation* of the objects and properties already known under other modes of presentation. On this interpretation, the puzzle about the argument is of a piece with other puzzles about intensionality, and many authors have explicitly drawn this comparison. Vladimir might know that Hesperus shines in the evening but not know that Phosphorus shines in the evening. We do not conclude from this that Hesperus is not Phosphorus since as is well known 'X knows that p' is not an extensional context. On this view, the fact that Hesperus shines in the evening is the same fact as the fact that Phosphorus shines in the evening—after all, they are the same star, the same shining, the same evening! So although Mary knows that red looks like this, this is not a new fact that she has learned but, analogously, a new mode of presentation of a fact she knew before.

But which fact is this? We need to identify something which can be referred to in more than one way, the relevant fact concerning which can be learned about in the black and white room. One way of putting it might be like this. When she leaves the black and white room, Mary judges that *seeing red is like this*. The physicalist says that seeing red is being in brain state B, so let's suppose Mary knew this in the black and white room. Mary can therefore infer that being in brain state B is like this. We therefore have two terms, 'seeing red', 'being in brain state B' which pick out the

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[18] Güven Güzeldere, 'Approaching consciousness' in Block *et al* (eds.) *The Nature of Consciousness*, p.38.

same thing, and a predicate 'like this' which can only be used when one is having the experience. But nonetheless, the experience is the brain state for all that.

So far so good. But remember that the distinction between different modes of presentation of the same thing is supposed to show that the second premise of the argument is false: *Mary does not learn anything new*. But it cannot show this. For if this construal of Mary's case and the case of Hesperus and Phosphorus are really parallel, then this entails that someone who comes to believe that Phosphorus shines in the evening because of their belief that Hesperus is Phosphorus does not learn anything new, but only comes to appreciate a previously known fact under a new mode of presentation. And this cannot be right: the original point of the distinction between sense and reference was to do justice to the fact that the discovery that Hesperus is Phosphorus can be a significant advance in someone's knowledge. It was a *discovery* about the heavens that Hesperus is Phosphorus, it was a new piece of knowledge that the ancients gained. So similarly the knowledge that Phosphorus shines in the evening is a new piece of knowledge. If facts are what you learn when you gain knowledge, then the normal approach to the distinction between sense and reference entails that what the Ancient astronomers learned when the learned that Hesperus is Phosphorus is a new fact.

Of course, there is *something* which is the same before and after this particular discovery: how things are in the world, the reference of the terms, the entities. No-one disputes this about the Hesperus/Phosphorus case. So one could say: 'in a sense the facts are the same, in a sense they are different'. But the relevant question is whether anything is *learned* when someone acquires the belief that Hesperus is Phosphorus, whether there is any new knowledge at all. And if there is a sense in which the fact learned *is* a new fact (even if there is a sense in which things are the same too) then there is new knowledge. This surely cannot be denied. Note that if you do deny this, you have to deny *at the very least* that there is new knowledge in the following sense: the knowledge that the two modes of presentation are modes of presentation of the

same thing.[19] But this makes it impossible to even state what it is that the ancients learned.

Since they introduced the parallel, it would be fruitless for physicalists to try and draw some principled difference between the Mary case and the case of Hesperus and Phosphorus. So either physicalism says that nothing new is learned in either case—which is a hopeless thing to say—or it says that something is learned in both cases. This is the only plausible thing to say. But then Mary does learn something new, the argument's premises are true, and we already decided it was valid. So is physicalism refuted?

**6. Physical facts and subjective facts**

This depends, of course, on what physicalism is. What is refuted is the doctrine that all facts are physical facts – given a certain understanding of 'physical' and 'fact'. The argument assumes a certain understanding of what 'physical facts' are.

What are facts? Philosophers have disagreed over the nature of facts, and over whether there are such things. Some say that facts are true propositions, others that they correspond one-one with true propositions, and others say that since they are what make true propositions true (they are 'truth-makers') they need not correspond one-to-one with true propositions.[20] What conception of fact does the knowledge argument assume? It is obvious, I think, that the knowledge argument has to assume that facts are *objects of propositional knowledge*—where a state of propositional knowledge is one described in claims of the form 'X knows that *p*' where X is a knower and 'p' is replaced by a sentence. So for something to be a new fact is at least for it to be a new piece of knowledge, an advance in someone's knowledge, some piece of knowledge that they did not have before.

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[19] See David Chalmers, *The Conscious Mind* (Oxford: OUP 1996)

[20]For these views, see G. Frege, 'The thought: a logical inquiry' in P.F. Strawson (ed.) *Philosophical Logic* (Oxford: Oxford University Press 1967); D.H. Mellor, *The Facts of Causation* (London: Routledge 1995); J.L. Austin, 'Unfair to facts' in Austin, *Philosophical Papers* (Oxford: Clarendon Press 1961); and Donald Davidson, 'True to the facts' in Davidson, *Inquiries into Truth and Interpretation* (Oxford: Oxford University Press 1984).

Does this mean that the knowledge argument covertly begs the question against physicalism by assuming a conception of *fact* which physicalism would reject? No. Whether or not physicalism decides to call objects of propositional knowledge 'facts', physicalism should certainly accept that there are objects of propositional knowledge, and that knowledge states are individuated partly by their objects. Everyone accepts that there are such objects of propositional knowledge, *whether or not* they also accept that there are facts in some other sense. So I think it is a mistake to say that we need to establish which theory of facts is correct before settling whether the knowledge argument works. This would be to claim that the argument had to have as a hidden premise that one particular theory of facts is the right one. But this is not so; everyone has to accept that there are objects of propositional knowledge.

The knowledge argument's conception of fact does not beg any questions. What it says is that a distinct piece of propositional knowledge is knowledge of a distinct fact. This is surely a very natural and uncontroversial idea. We can learn skills or pieces of information, when we learn pieces of information what we learn are facts. But it is sometimes said that there are two notions of pieces of information (or fact): a coarse-grained notion and a fine-grained notion.[21] According to the fine-grained notion, facts are individuated at the level of sense; for the coarse-grained notion, facts are individuated at the level of reference. Note that this point is sometimes put in service of the mistaken idea (dismissed above) that Mary learns nothing new, but only gains a new 'mode of access' to what she knew already. If one uses the distinction between coarse and fine grained facts to support this mistaken idea, then one is forced to say that *only* the coarse-grained notion is relevant to the individuation of knowledge. But this is clearly false, and not something a physicalist should appeal to, for all the reasons given in the previous section.

In *The Facts of Causation* (1995), Mellor makes a distinction between facts and what he calls *facta*. Facts are the 'shadows' of truths – if it is true that *p* it is a fact

[21] See, e.g., Van Gulick, 'Understanding the phenomenal mind' pp.562-3.

that *p*. Facta are the truth-makers for truths; it is an empirical question which facts there are, just as it is an empirical question which properties there are. So we should not infer difference of facta from difference of facts; facta and facts do not stand in one-one correspondence. For present purposes this distinction corresponds to the distinction between fine-grained and coarse-grained facts. I think we should agree with Mellor that both notions of fact (or the notions of fact and factum) have their place. This is consistent with saying what I said above, namely that the objects of knowledge are normally individuated in a fine-grained way. Maybe sometimes we individuate the objects of knowledge in a coarse-grained way. That's perfectly acceptable too. But so long as we do also individuate objects of knowledge in a fine-grained way, then we should accept the conclusion that Mary learns a new fact.

Having said what the argument means by 'fact' we can now turn to 'physical'. What we are asked to imagine is that the knowledge which one acquires about colours inside Jackson's black-and-white room is stated in the language of physics. But it would not help Mary if she learned things in the room which were in the language of psychology and physiology. Not would it help her if she learned a fully developed dualist psychology (if there were such a thing) talking about states of consciousness while explicitly acknowledging their utterly non-physical nature. None of these theories would help tell her what it is like to see red. The point is not that the kind of knowledge she gains in the black-and-white room is physical knowledge; rather, the point is that it is the sort of knowledge that can be stated in some form or another: it's 'book-learning'. As David Lewis puts it, the 'intuitive starting point wasn't just that *physics* lessons couldn't help the inexperienced to know what it is like. It was that *lessons* couldn't help'.[22]

So although physicalism—understood as the view that all facts are physical facts—is one of the targets of the argument, it is really an instance of a more general target: the view that all knowledge of the world is the kind that can be imparted in lessons, without presupposing any particular kind of experience. Thus any view which

[22]See David Lewis, 'What experience teaches' p.281; see also D.H. Mellor, 'Nothing like experience'.

was committed to this view of knowledge would come within the knowledge argument's range. Likewise with Cartesian dualism—one could not know what it is like to see red, the argument implies, even if one learned the complete Cartesian theory of the mind.

Paul Churchland has argued that this feature of the argument shows that it proves too much.[23] He thinks that Jackson's argument involves a 'logical pathology': it 'makes any scientific account of our sensory experience entirely impossible, no matter what the ontology employed'. But this is plainly a non-sequitur: all that follows from the knowledge argument is that if one *knew* the full scientific account of our sensory experience, it would not follow that one knew what it was like to have the experience. This entails nothing about whether such a full scientific account of the workings of our senses can be given. Now Churchland himself identifies this as the main issue at one point:

> if it works at all, Jackson's argument works against physicalism not because of some defect that is unique to physicalism; *it works because no amount of discursive knowledge, on any topic, will constitute the nondiscursive knowledge that Mary lacks.*[24]

But he takes this to be connected to the claim that any scientific account of experience must be impossible. This, I think, is a mistake, for the reason just given. (Note that since I think Mary gains propositional knowledge, I would not identify 'discursive' with 'propositional'.)

It is true that what Mellor (in the quotation above) calls 'the factual scope of objective science' is shown to be restricted by the knowledge argument. For no scientific account of vision will tell the blind what it is like to see, and I have argued that what the blind lack here is (in addition to ability-knowledge and acquaintance knowledge) propositional knowledge. These pieces of propositional knowledge –

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[23] Churchland, 'Reduction, qualia and the direct introspection of brain states'; see also 'Knowing qualia: a reply to Jackson' in Block *et al* (eds.) *The Nature of Consciousness* p.574. Jackson attempts to answer this criticism in 'What Mary did not know' (in Block *et al* (eds.) *The Nature of Consciousness*), but on the implausible grounds that there *is* a difference between the kind of knowledge a dualist psychology would give and the kind a physicalist theory would give.

[24] 'Knowing qualia: a reply to Jackson' p.574.

these kinds of fact – are what objective science cannot express. But no-one should expect it to; this should not be seen as a mysterious 'restriction' on the powers of science.

I conclude that there is no fallacy in the knowledge argument; but perhaps now we are beginning to see that its conclusion is stated rather misleadingly, i.e. as an objection to *physicalism*. For even if physicalism is the view that all facts are physical facts, the knowledge argument is an objection to more than this (so far, Churchland is right). It is really an objection to the view that all facts are, so to speak, 'book-learning' facts: *facts the learning of which do not require you to have a certain kind of experience or occupy a certain position in the world*. (As Jackson says, 'you do not need colour television to learn physics or functionalist psychology'.[25]) 'Objective' would be a good name for these facts. And 'subjective' would therefore be a good name for *those facts the learning of which requires that one has certain kinds of experience, or occupies a certain position in the world,* etc. This why I say that the knowledge argument is an argument for the view that there are *subjective facts*. It is an argument which shows that in order to gain new knowledge of a certain sort – to learn new facts – you have to have experiences of a certain sort.

That there are subjective facts in this sense should not really come as a surprise. For another example of a fact whose apprehension depends on the subject's specific location in space and time, consider the case of indexical knowledge. Consider, for example, Vladimir lost in the forest; he consults his compass and a map and remarks with relief 'I am here!' pointing to a place on the map. When Vladimir exclaims 'I am here!' pointing at the map, this is something he learned. He now knows where he is, and he didn't before. In a classic paper, John Perry describes himself following a trail of sugar around a supermarket, intending to tell the shopper from whom it came that he was making a mess.[26] When Perry realised that *he* was making a mess he learned something, that he expresses by saying 'It's me! I am making a mess!'. And this piece of knowledge is distinct from the knowledge he

[25] 'What Mary did not know' p.569.
[26]See John Perry, 'The problem of the essential indexical' *Nous* 13 (1979) 3-21.

would express by saying 'The shopper with the leaking sugar bag is making a mess'. Both examples of new pieces of knowledge require one to have a certain position in the world: Vladimir and Perry cannot learn what they learn without occupying certain positions, or being the person that they are. In particular, they cannot learn these pieces of knowledge, these facts, from books. How could they? (Some writers have noted here the analogy with the knowledge argument. I will discuss this further below.)[27] What Mary, Vladimir and Perry have all learned are *subjective facts*.

Someone might try to neutralise this conclusion at this point by appealing to the distinction between facts as *truths* and facts as *truth-makers*. Perhaps such a theorist may admit that there are subjective facts in the sense of subjective *truths*, or in the sense of objects of knowledge (so long as objects of knowledge are individuated by sense rather than solely by reference). That is, even if this theorist were persuaded by my argument that Mary does learn a new fact, and that her situation is relevantly like the indexical case, they may nonetheless say that this is just another way of saying that there are subjective *truths*. What really matters is the denial of subjective *truth-makers* (or in Mellor's terminology, *facta*). And this, as the indexical analogy shows, is untouched by the knowledge argument.

But what would a subjective truth-maker be? A subjective fact, as I defined it above, is a fact the learning of which requires that the learner has a certain kind of experience or occupies a certain position in the world. Truth-makers, by contrast, are not learned: they are what *make true* the truths that are learned. So maybe we could say this: a subjective truth-maker is the truth-maker for a subjective truth or fact. Or: a subjective truth-maker is what has to exist in order for a subjective fact to be learned. (This is rough, but nothing here depends on its being more precise.) So what needs to be the case for Mary to learn that red looks like this? An obvious part of the answer is: a visual experience of red. Mary's visual experience of red needs to exist if she is to learn that red looks like this. Now if a subjective truth-maker is an experience, then no-one should deny the existence of subjective truth-makers; for the issue is not about

[27]For the use of the parallel with indexicals as a response to the knowledge argument, see Georges Rey, 'Sensational sentences' in Block *et al* (eds.) *The Nature of Consciousness*.

the existence of *experiences*. Experiences are subjective in the sense that they depend on the existence of experiencing *subjects*; but no-one in this debate denies the existence of experiencing subjects (e.g. Mary) either. So what could someone be denying if he were to deny that there are subjective truth-maker?

The objective/subjective distinction I drew above was between different kinds of knowledge. Admittedly, it is hard to see how it clearly applies to kinds of entity. The physicalist should certainly say that one of the entities which constitute the truth-maker for Mary's knowledge that *red looks like this* is: Mary's experience of the tomato. And this experience might be called a subjective entity in the sense that it is an entity which is dependent on a subject of experience. The experience could be called a subjective truth-maker, then. So it seems that everyone must accept that there are subjective facts (truths) and that (in so far as the idea makes sense) there are subjective truth-makers too, since there are experiences. The truth/truth-maker distinction does not help the physicalist escape the conclusion of the knowledge argument.

I have argued that the physicalist should accept that there are subjective facts. The question now is how this can be made compatible with more plausible versions of physicalism; that is, versions which do not say that all facts are physical or objective.

**7. Physicalism revisited and re-described**

The knowledge argument takes physicalism to be the view that all facts are physical. Given what it means by 'fact', this means that all propositional knowledge is physical. And given what is meant by 'physical', this means that all knowledge is the kind of knowledge which can be learned inside a scenario like the black and white room—that is, without having to have any particular kind of experience. So the target of the argument is that all facts are 'objective facts'. And this is the view that the knowledge argument refutes. Conclusively.

But: why should physicalists have to say that all *knowledge* is physical in this sense? Indeed, why should physicalism be a thesis about knowledge at all?

Physicalism is a view about what there is, and only derivatively about how we know it. The strongest and clearest motivation for physicalism, I have argued, comes from its claim to explain mental causation.[28] In order to do this, physicalism need not be committed to the view that all knowledge must be expressible without the expresser having to have any particular experiences. It just needs to be committed to the idea that physics is *causally closed,* not even to the view that physics is *explanatorily adequate*.[29] Therefore, physicalism does not need to say that *physics must state all the facts*. (The idea that it must may derive from the image of the book of the world, with all the truths written down in the one true story of reality. But the image is misleading; if what I say here is right, there could never be such a book. For the book cannot express the proposition that Vladimir expresses when he says 'I am here!' and that Mary expresses when she says 'red looks like this!'.)

It is at this point – rather than in the mistaken attempt to dispute the argument's second premise – that the physicalist should appeal to the parallel with indexicality. The idea that Vladimir and Perry gain new knowledge – knowledge of new facts – is compatible with every object and property involved in these stories being physical, in the sense of *the subject matter of physical science*. And it is compatible with every object and property being objective, in the following sense: *the subject matter of objective science*. The fact that these pieces of knowledge are only available from certain perspectives does not entail that there are some further non-physical/non-objective objects and properties involved in the these situations. What is subjective are the facts.

Now many have made the connection between indexicality and the knowledge argument. But it is important to emphasise that to appreciate it, we do not need to enter the debate about what is the correct theory of facts or resolve the question of

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[28] See David Papineau, 'The rise of physicalism' and Barry Loewer, 'From physics to physicalism' both in Carl Gillett and Barry Loewer (eds.) *Physicalism and its Discontents* (Cambridge: CUP 2001).
[29] Lewis argues that physics has 'explanatory adequacy' in 'An argument for the identity theory'; but the argument from mental causation to physicalism only needs the claim that physics is *casually closed,* not that it is explanatorily adequate: see my *Elements of Mind* (Oxford: Oxford University Press 2001) §12.

how to individuate propositions.[30] And we do not have to make the implausible move that Mary learns nothing that is really new. All we need is to recognise that there is knowledge which can only be had from certain points of view: knowledge of subjective facts. This knowledge will not be physical knowledge in the knowledge argument's sense. But this should not worry the physicalist. Surprising as it may seem, a physicalist can (and should) sensibly deny that all knowledge is (in the relevant sense) physical knowledge.[31] And they should therefore deny that all facts are physical facts. This is because not all knowledge is (in the relevant sense) objective knowledge – that is, knowledge of objective facts. Therefore not all facts are objective facts.

A number of writers have drawn attention to the fact that the argument moves from epistemological premises to a metaphysical conclusion.[32] Mellor says that the existence of subjective facts has 'been falsely inferred from certain kinds of knowledge'.[33] In so considering the matter, these philosophers have tried to find something wrong with the argument. But as I have tried to show, there is nothing wrong with the argument, there is no false inference. Indeed, demonstrating exactly what the argument achieves should in itself tell us why we should not be worried by it. So long as physicalists do not hold that all knowledge is physical or objective, that all facts are physical or objective, or that physics must be 'explanatorily adequate' – or that objective science can state all the facts – then the knowledge argument poses no objection to the physicalist. It tells us, rather, something important about our knowledge, something even physicalists must accept.

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[30]So I disagree with Van Gulick ('Understanding the phenomenal mind' pp.562-563) that this is the most fruitful line to pursue.
[31]Here I agree with Tye, *Ten Problems of Consciousness* (Cambridge, Mass.: MIT Press 1995).
[32]See Frank Jackson, 'Postscript' to 'What Mary did not know'; and David Lewis, 'What experience teaches'; Joseph Levine, 'On leaving out what it's like' in M. Davies and G. Humphreys (eds.) *Consciousness* (Oxford: Blackwell 1993) Horgan, 'Jackson on physical information and qualia'; among many others.
[33] 'Nothing like experience' 1992 p.1.